

LORDS OF THE FLY



***Drosophila* Genetics and the
Experimental Life**

Robert E. Kohler

Lords Of The Fly Drosophila Genetics And The Experimental Life

Robert E. Kohler



Lords Of The Fly Drosophila Genetics And The Experimental Life:

Lords of the Fly Robert E. Kohler, 1994-05-02 One of the most productive of all laboratory animals *Drosophila* has been a key tool in genetics research for nearly a century At the center of *Drosophila* culture from 1910 to 1940 was the school of Thomas Hunt Morgan and his students Alfred Sturtevant and Calvin Bridges who by inbreeding fruit flies created a model laboratory creature the standard fly By examining the material culture and working customs of Morgan's research group the author brings to light essential features of the practice of experimental science This book takes a broad view of experimental work ranging from how the fly was introduced into the laboratory and how it was physically redesigned for use in genetic mapping to how the *Drosophilists* organized an international network for exchanging fly stocks that spread their practices around the world Back cover

Lords of the Fly Robert E. Kohler, 1994-05-02 The common fruit fly *Drosophila* has long been one of the most productive of all laboratory animals From 1910 to 1940 the center of *Drosophila* culture in America was the school of Thomas Hunt Morgan and his students Alfred Sturtevant and Calvin Bridges They first created standard flies through inbreeding and by organizing a network for exchanging stocks of flies that spread their practices around the world In *Lords of the Fly* Robert E Kohler argues that fly laboratories are a special kind of ecological niche in which the wild fruit fly is transformed into an artificial animal with a distinctive natural history He shows that the fly was essentially a laboratory tool whose startling productivity opened many new lines of genetic research Kohler also explores the moral economy of the *Drosophilists* the rules for regulating access to research tools allocating credit for achievements and transferring authority from one generation of scientists to the next By closely examining the *Drosophilists* culture and customs Kohler reveals essential features of how experimental scientists do their work Landscapes and Labscapes Robert E. Kohler, 2010-11-15

What is it like to do field biology in a world that exalts experiments and laboratories How have field biologists assimilated laboratory values and practices and crafted an exact quantitative science without losing their naturalist souls In *Landscapes and Labscapes* Robert E Kohler explores the people places and practices of field biology in the United States from the 1890s to the 1950s He takes readers into the fields and forests where field biologists learned to count and measure nature and to read the imperfect records of nature's experiments He shows how field researchers use nature's particularities to develop practices of place that achieve in nature what laboratory researchers can only do with simplified experiments Using historical frontiers as models Kohler shows how biologists created vigorous new border sciences of ecology and evolutionary biology

Genetics and Plant Breeding Roderick Wiley &, 2019-08-13 Plant breeding concerned with the improvement of crops through techniques involving creation of genetic variation and subsequent selection of the desirable genotype is crucial to the continual growth of agriculture especially if the introduction of such crops with characters like high yield superior quality early maturity resistance to disease and pests etc is to be done Genetically modified plants are created by the process of genetic engineering which allows scientists to move genetic material between organisms with the aim of changing their

characteristics All organisms are composed of cells that contain the DNA molecule Molecules of DNA form units of genetic information known as genes Modern techniques of genetic engineering are essentially a refinement of the kinds of genetic modifications that have long been used to enhance plants, microorganisms and animals for food Advancements in molecular and cell biology have led to the development of a range of techniques for manipulating genomes collectively termed as biotechnology Today biotechnology is being used as a tool to give plants new traits that benefit agricultural production, the environment and human nutrition and health This book aims at providing the basic background on all aspects related to cell genetics and plant breeding Classical Genetic Research and Its Legacy Jean-Paul Gaudillière, Hans-Jörg

Rheinberger, 2004-10-07 With the rise of genomics the life sciences have entered a new era This book provides a comprehensive history of mapping procedures as they were developed in classical genetics An accompanying volume From Molecular Genetics to Genomics covers the history of molecular genetics and genomics The book shows that the technology of genetic mapping is by no means a recent acquisition of molecular genetics or even genetic engineering It demonstrates that the development of mapping technologies has accompanied the rise of modern genetics from its very beginnings In Section One Mendelian genetics is set in perspective from the viewpoint of the detection and description of linkage phenomena Section Two addresses the role of mapping for the experimental working practice of classical geneticists, their social interactions and for the laboratory life worlds With detailed analyses of the scientific practices of mapping and its illustration of the diversity of mapping practices this book is a significant contribution to the history of genetics A companion volume from the same editors From Molecular Genetics to Genomics The Mapping Cultures of Twentieth Century Genetics covers the history of molecular genetics and genomics *Model Behavior* Nicole C. Nelson, 2018-04-04 Mice are used as model organisms across a wide range of fields in science today but it is far from obvious how studying a mouse in a maze can help us understand human problems like alcoholism or anxiety How do scientists convince funders, fellow scientists, the general public and even themselves that animal experiments are a good way of producing knowledge about the genetics of human behavior In *Model Behavior* Nicole C. Nelson takes us inside an animal behavior genetics laboratory to examine how scientists create and manage the foundational knowledge of their field Behavior genetics is a particularly challenging field for making a clear cut case that mouse experiments work because researchers believe that both the phenomena they are studying and the animal models they are using are complex These assumptions of complexity change the nature of what laboratory work produces Whereas historical and ethnographic studies traditionally portray the laboratory as a place where scientists control, simplify and stabilize nature in the service of producing durable facts, the laboratory that emerges from Nelson's extensive interviews and fieldwork is a place where stable findings are always just out of reach The ongoing work of managing precarious experimental systems means that researchers learn as much if not more about the impact of the environment on behavior as they do about genetics *Model Behavior* offers a compelling portrait of life in a twenty first

century laboratory where partial provisional answers to complex scientific questions are increasingly the norm Science in the Twentieth Century John Krige, Dominique Pestre, 2013-11-19 With over forty chapters written by leading scholars this comprehensive volume represents the best work in America Europe and Asia Geographical diversity of the authors is reflected in the different perspectives devoted to the subject and all major disciplinary developments are covered There are also sections concerning the countries that have made the most significant contributions the relationship between science and industry the importance of instrumentation and the cultural influence of scientific modes of thought Students and professionals will come to appreciate how and why science has developed as with any other human activity it is subject to the dynamics of society and politics **DNA** James D. Watson, Andrew Berry, Kevin Davies, 2017-08-22 The definitive insider s history of the genetic revolution significantly updated to reflect the discoveries of the last decade James D Watson the Nobel laureate whose pioneering work helped unlock the mystery of DNA s structure charts the greatest scientific journey of our time from the discovery of the double helix to today s controversies to what the future may hold Updated to include new findings in gene editing epigenetics agricultural chemistry as well as two entirely new chapters on personal genomics and cancer research This is the most comprehensive and authoritative exploration of DNA s impact practical social and ethical on our society and our world Deep Homology? Lewis I. Held, Jr, 2017-01-28 Humans and flies look nothing alike yet their genetic circuits are remarkably similar Here Lewis I Held Jr compares the genetics and development of the two to review the evidence for deep homology the biggest discovery from the emerging field of evolutionary developmental biology Remnants of the operating system of our hypothetical common ancestor 600 million years ago are compared in chapters arranged by region of the body from the nervous system limbs and heart to vision hearing and smell Concept maps provide a clear understanding of the complex subjects addressed while encyclopaedic tables offer comprehensive inventories of genetic information Written in an engaging style with a reference section listing thousands of relevant publications this is a vital resource for scientific researchers and graduate and undergraduate students Genetic Medicine Barton Childs, 2003-09-15 In Genetic Medicine A Logic of Disease Barton Childs demonstrates that knowledge of the ways both genes and environment contribute to disease provides a rational basis for medical thinking This genetic medicine he explains should help the physician use the results of laboratory tests to perceive the uniqueness of the patient as well as that of the family and the cultural conditions in which the patient s condition arose Childs thus provides a conceptual framework within which to teach and practice a humane medicine

As recognized, adventure as capably as experience more or less lesson, amusement, as skillfully as concord can be gotten by just checking out a books **Lords Of The Fly Drosophila Genetics And The Experimental Life** with it is not directly done, you could take on even more in this area this life, on the world.

We find the money for you this proper as competently as simple pretentiousness to get those all. We meet the expense of Lords Of The Fly Drosophila Genetics And The Experimental Life and numerous ebook collections from fictions to scientific research in any way. accompanied by them is this Lords Of The Fly Drosophila Genetics And The Experimental Life that can be your partner.

https://pinsupreme.com/results/virtual-library/index.jsp/rebel_georgia.pdf

Table of Contents Lords Of The Fly Drosophila Genetics And The Experimental Life

1. Understanding the eBook Lords Of The Fly Drosophila Genetics And The Experimental Life
 - The Rise of Digital Reading Lords Of The Fly Drosophila Genetics And The Experimental Life
 - Advantages of eBooks Over Traditional Books
2. Identifying Lords Of The Fly Drosophila Genetics And The Experimental Life
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Lords Of The Fly Drosophila Genetics And The Experimental Life
 - User-Friendly Interface
4. Exploring eBook Recommendations from Lords Of The Fly Drosophila Genetics And The Experimental Life
 - Personalized Recommendations
 - Lords Of The Fly Drosophila Genetics And The Experimental Life User Reviews and Ratings
 - Lords Of The Fly Drosophila Genetics And The Experimental Life and Bestseller Lists

5. Accessing Lords Of The Fly Drosophila Genetics And The Experimental Life Free and Paid eBooks
 - Lords Of The Fly Drosophila Genetics And The Experimental Life Public Domain eBooks
 - Lords Of The Fly Drosophila Genetics And The Experimental Life eBook Subscription Services
 - Lords Of The Fly Drosophila Genetics And The Experimental Life Budget-Friendly Options
6. Navigating Lords Of The Fly Drosophila Genetics And The Experimental Life eBook Formats
 - ePub, PDF, MOBI, and More
 - Lords Of The Fly Drosophila Genetics And The Experimental Life Compatibility with Devices
 - Lords Of The Fly Drosophila Genetics And The Experimental Life Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Lords Of The Fly Drosophila Genetics And The Experimental Life
 - Highlighting and Note-Taking Lords Of The Fly Drosophila Genetics And The Experimental Life
 - Interactive Elements Lords Of The Fly Drosophila Genetics And The Experimental Life
8. Staying Engaged with Lords Of The Fly Drosophila Genetics And The Experimental Life
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Lords Of The Fly Drosophila Genetics And The Experimental Life
9. Balancing eBooks and Physical Books Lords Of The Fly Drosophila Genetics And The Experimental Life
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Lords Of The Fly Drosophila Genetics And The Experimental Life
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Lords Of The Fly Drosophila Genetics And The Experimental Life
 - Setting Reading Goals Lords Of The Fly Drosophila Genetics And The Experimental Life
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Lords Of The Fly Drosophila Genetics And The Experimental Life
 - Fact-Checking eBook Content of Lords Of The Fly Drosophila Genetics And The Experimental Life
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning

- Utilizing eBooks for Skill Development
- Exploring Educational eBooks

14. Embracing eBook Trends

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

Lords Of The Fly Drosophila Genetics And The Experimental Life Introduction

In today's digital age, the availability of Lords Of The Fly Drosophila Genetics And The Experimental Life books and manuals for download has revolutionized the way we access information. Gone are the days of physically flipping through pages and carrying heavy textbooks or manuals. With just a few clicks, we can now access a wealth of knowledge from the comfort of our own homes or on the go. This article will explore the advantages of Lords Of The Fly Drosophila Genetics And The Experimental Life books and manuals for download, along with some popular platforms that offer these resources. One of the significant advantages of Lords Of The Fly Drosophila Genetics And The Experimental Life books and manuals for download is the cost-saving aspect. Traditional books and manuals can be costly, especially if you need to purchase several of them for educational or professional purposes. By accessing Lords Of The Fly Drosophila Genetics And The Experimental Life versions, you eliminate the need to spend money on physical copies. This not only saves you money but also reduces the environmental impact associated with book production and transportation. Furthermore, Lords Of The Fly Drosophila Genetics And The Experimental Life books and manuals for download are incredibly convenient. With just a computer or smartphone and an internet connection, you can access a vast library of resources on any subject imaginable. Whether you're a student looking for textbooks, a professional seeking industry-specific manuals, or someone interested in self-improvement, these digital resources provide an efficient and accessible means of acquiring knowledge. Moreover, PDF books and manuals offer a range of benefits compared to other digital formats. PDF files are designed to retain their formatting regardless of the device used to open them. This ensures that the content appears exactly as intended by the author, with no loss of formatting or missing graphics. Additionally, PDF files can be easily annotated, bookmarked, and searched for specific terms, making them highly practical for studying or referencing. When it comes to accessing Lords Of The Fly Drosophila Genetics And The Experimental Life books and manuals, several platforms offer an extensive collection of resources. One such platform is Project Gutenberg, a nonprofit organization that provides over 60,000 free eBooks. These books are primarily in the public domain, meaning they can be freely distributed and downloaded. Project Gutenberg offers a wide range of classic literature, making it an excellent resource for literature enthusiasts. Another popular platform for Lords Of The Fly Drosophila Genetics And The Experimental Life books and manuals is Open Library. Open Library is an initiative of the Internet Archive, a non-

profit organization dedicated to digitizing cultural artifacts and making them accessible to the public. Open Library hosts millions of books, including both public domain works and contemporary titles. It also allows users to borrow digital copies of certain books for a limited period, similar to a library lending system. Additionally, many universities and educational institutions have their own digital libraries that provide free access to PDF books and manuals. These libraries often offer academic texts, research papers, and technical manuals, making them invaluable resources for students and researchers. Some notable examples include MIT OpenCourseWare, which offers free access to course materials from the Massachusetts Institute of Technology, and the Digital Public Library of America, which provides a vast collection of digitized books and historical documents. In conclusion, Lords Of The Fly Drosophila Genetics And The Experimental Life books and manuals for download have transformed the way we access information. They provide a cost-effective and convenient means of acquiring knowledge, offering the ability to access a vast library of resources at our fingertips. With platforms like Project Gutenberg, Open Library, and various digital libraries offered by educational institutions, we have access to an ever-expanding collection of books and manuals. Whether for educational, professional, or personal purposes, these digital resources serve as valuable tools for continuous learning and self-improvement. So why not take advantage of the vast world of Lords Of The Fly Drosophila Genetics And The Experimental Life books and manuals for download and embark on your journey of knowledge?

FAQs About Lords Of The Fly Drosophila Genetics And The Experimental Life Books

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer webbased readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Lords Of The Fly Drosophila Genetics And The Experimental Life is one of the best book in our library for free trial. We provide copy of Lords Of The Fly Drosophila Genetics And The Experimental Life in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Lords Of The Fly Drosophila Genetics And The Experimental Life. Where to download Lords Of The Fly Drosophila Genetics And The Experimental Life online for free? Are you looking for Lords Of The Fly Drosophila

Genetics And The Experimental Life PDF? This is definitely going to save you time and cash in something you should think about. If you trying to find then search around for online. Without a doubt there are numerous these available and many of them have the freedom. However without doubt you receive whatever you purchase. An alternate way to get ideas is always to check another Lords Of The Fly Drosophila Genetics And The Experimental Life. This method for see exactly what may be included and adopt these ideas to your book. This site will almost certainly help you save time and effort, money and stress. If you are looking for free books then you really should consider finding to assist you try this. Several of Lords Of The Fly Drosophila Genetics And The Experimental Life are for sale to free while some are payable. If you arent sure if the books you would like to download works with for usage along with your computer, it is possible to download free trials. The free guides make it easy for someone to free access online library for download books to your device. You can get free download on free trial for lots of books categories. Our library is the biggest of these that have literally hundreds of thousands of different products categories represented. You will also see that there are specific sites catered to different product types or categories, brands or niches related with Lords Of The Fly Drosophila Genetics And The Experimental Life. So depending on what exactly you are searching, you will be able to choose e books to suit your own need. Need to access completely for Campbell Biology Seventh Edition book? Access Ebook without any digging. And by having access to our ebook online or by storing it on your computer, you have convenient answers with Lords Of The Fly Drosophila Genetics And The Experimental Life To get started finding Lords Of The Fly Drosophila Genetics And The Experimental Life, you are right to find our website which has a comprehensive collection of books online. Our library is the biggest of these that have literally hundreds of thousands of different products represented. You will also see that there are specific sites catered to different categories or niches related with Lords Of The Fly Drosophila Genetics And The Experimental Life So depending on what exactly you are searching, you will be able to choose ebook to suit your own need. Thank you for reading Lords Of The Fly Drosophila Genetics And The Experimental Life. Maybe you have knowledge that, people have search numerous times for their favorite readings like this Lords Of The Fly Drosophila Genetics And The Experimental Life, but end up in harmful downloads. Rather than reading a good book with a cup of coffee in the afternoon, instead they juggled with some harmful bugs inside their laptop. Lords Of The Fly Drosophila Genetics And The Experimental Life is available in our book collection an online access to it is set as public so you can download it instantly. Our digital library spans in multiple locations, allowing you to get the most less latency time to download any of our books like this one. Merely said, Lords Of The Fly Drosophila Genetics And The Experimental Life is universally compatible with any devices to read.

Find Lords Of The Fly Drosophila Genetics And The Experimental Life :

rebel georgia

reality of prayer

recipes for your grilling machine

recent american literature after 1930 contemporary literature of the western...

recent advances in the modeling of hydrologic systems

recipes for learning to cook a phonetic cookbook dace publishing vocabulary extention series

realist vision

recent urban and regional developments in poland and the netherlands

recent advances in the biology of alcoholism

rebel down under when the shenandoah shook melbourne 1865.

recent advances in adsorption and ion exchange

reality of god

rebuilding your father relationship

reasons for believing a seekers guide to christianity

real world algebra

Lords Of The Fly Drosophila Genetics And The Experimental Life :

Beyond Willpower: The Secret... by Loyd PhD. ND, Alexander This item: Beyond Willpower: The Secret Principle to Achieving Success in Life, Love, and Happiness. Alexander Loyd PhD. ND. 4.6 out of 5 stars 445. Hardcover. Beyond Willpower: The Secret Principle to Achieving ... Feb 6, 2015 — No matter how you define success as wealth, career satisfaction, healing of health issues, or resolution of relationship problems. Beyond ... Beyond Willpower: The Secret Principle to Achieving ... Feb 10, 2015 — No matter how you define success - as wealth, career satisfaction, healing of health issues, or resolution of relationship problems -Beyond ... Customer reviews: Beyond Willpower Find helpful customer reviews and review ratings for Beyond Willpower: The Secret Principle to Achieving Success in Life, Love, and Happiness at Amazon.com. Beyond Willpower: The Secret Principle to Achieving ... Beyond Willpower: The Secret Principle to Achieving Success in Life, Love, and Happiness by Loyd PhD. ND, Alexander - ISBN 10: 1101902817 - ISBN 13: ... Beyond Willpower: The Secret Principle to... The Love Code: The Secret Principle to Achieving Success in Life, Love, and Happiness. Beyond Willpower Summary of Key Ideas and Review Beyond Willpower by Alexander Loyd is a self-help book that explores the root causes of self-sabotage and offers a step-by-step process for overcoming it, ... The Love Code: The Secret Principle to Achieving Success ... May 10, 2016 — Loyd believes that we need to understand how love works in our bodies to combat stress. By harnessing love's power and learning to live in the ... Beyond Willpower: Summary Review D, N.D, is a self-help book that discusses the importance of

understanding and harnessing the power of the subconscious mind in order to achieve success in ... Alex Loyd PhD: Beyond Willpower - YouTube The Third World War - The Untold Story This was to be a critical day in the history of the Third World War. ... succeeded in presenting a fair picture of the free world and a faithful account of what ... The Third World War : the untold story : Hackett, John Oct 5, 2010 — The Third World War : the untold story ; Publication date: 1983 ; Topics: Imaginary wars and battles, World War III ; Publisher: Toronto [u.a.] : ... The Third World War - The Untold Story - Z-Library Download The Third World War - The Untold Story book for free from Z-Library. Third World War: The Untold Story by Hackett, John Expanding on the imaginary chronicle of cataclysmic global conflict, this volume probes the inner sanctum of the Soviet Politburo and the struggles within ... The Third World War: The Untold Story by John W. Hackett The Third World War: The Untold Story. John W. Hackett. 3.62. 276 ratings20 reviews ... Create a free account to discover what your friends think of this book! The Third World War (Hackett novels) The Third World War and The Third World War: The Untold Story are war novels by Sir John Hackett, published in 1978 and 1982, by Macmillan in New York and ... [TMP] The Third World War: The Untold Story Mar 22, 2018 — ... free membership account. The Third World War: The Untold Story. The Startling New Bestseller. Rating: ... Third World War: The Untold Story - Hardcover Expanding on the imaginary chronicle of cataclysmic global conflict, this volume probes the inner sanctum of the Soviet Politburo and the struggles within ... Publication: The Third World War: The Untold Story Publication: The Third World War: The Untold Story Publication Record # 228865 · Author: General Sir John Hackett · Date: 1983-05-00 · Catalog ID: 6175 · Publisher: ... The Third World War - The Untold Story by etc. Paperback Book ... The Third World War - The Untold Story by etc. Paperback Book The Fast Free. FREE US DELIVERY | ISBN: 0450055914 | Quality Books. Douglas McTaggart: 9781442550773 - Economics 7th Ed. Comprehensive Economics text book covering both micro and macroeconomic theories and application. "synopsis" may belong to another edition of this title. Economics - Douglas McTaggart, Christopher Charles ... Economics 7th edition provides a streamlined approach to study and ... Douglas McTaggart, Christopher Findlay, Michael Parkin Limited preview - 2015. Economics Economics by Douglas F. McTaggart, Christopher Findlay ... Economics 7E provides a streamlined approach to study and recognises the difficulties some students may face in comprehending key concepts. By leaving the more ... Economics - Douglas McTaggart, Christopher Findlay, ... May 20, 2015 — Economics 7th edition provides a streamlined approach to study and ... Douglas McTaggart, Christopher Findlay, Michael Parkin. Edition, 7. Economics / Douglas McTaggart, Christopher Findlay, ... The seventh edition of this benchmark Australian text continues to offer students a comprehensive and relevant introduction to economics whilst offering ... McTaggart Findlay Parkin | Get Textbooks by Douglas McTaggart, Michael Parkin, Christopher Findlay 391 Pages, Published 2009. ISBN-13: 978-1-4425-1112-5, ISBN: 1-4425-1112-5. Economics 7th Ed.(7th ... Macroeconomics 7th edition 9781442550797 Jul 15, 2020 — Macroeconomics 7th Edition is written by Douglas McTaggart; Christopher Findlay; Michael Parkin and published by P.Ed Australia.

Microeconomics - Douglas McTaggart, Christopher Findlay ... The seventh edition of this benchmark Australian text continues to offer students a comprehensive and relevant introduction to economics whilst offering ... Macroeconomics / Douglas McTaggart, Christopher ... Macroeconomics / Douglas McTaggart, Christopher Findlay, Michael Parkin-book. ... 7th ed. Show collections Hide collections. Show All Show Less. General note. MICROECONOMICS Title: Microeconomics / Douglas McTaggart, Christopher Findlay, Michael Parkin. ... this seventh edition of Economics. This comprehensive revision also ...